3/12/07
(5)

"SITE PLAN DRAWINGS"

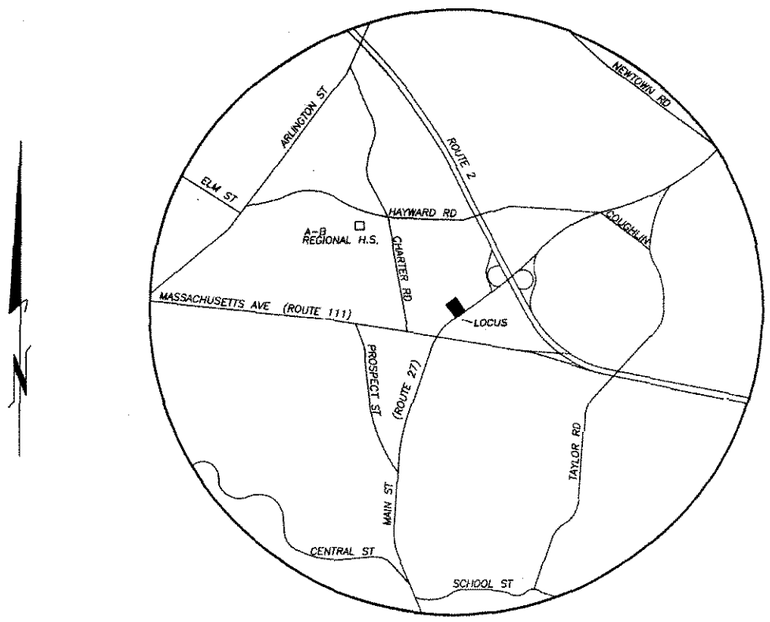
288 MAIN STREET

ACTON, MASSACHUSETTS 01720

JULY 10, 2006
REVISED: DECEMBER 6, 2006
REVISED: DECEMBER 28, 2006
REVISED: MARCH 6, 2007

OWNER
EDWARD BRAVO
288 MAIN STREET
ACTON, MA 01720

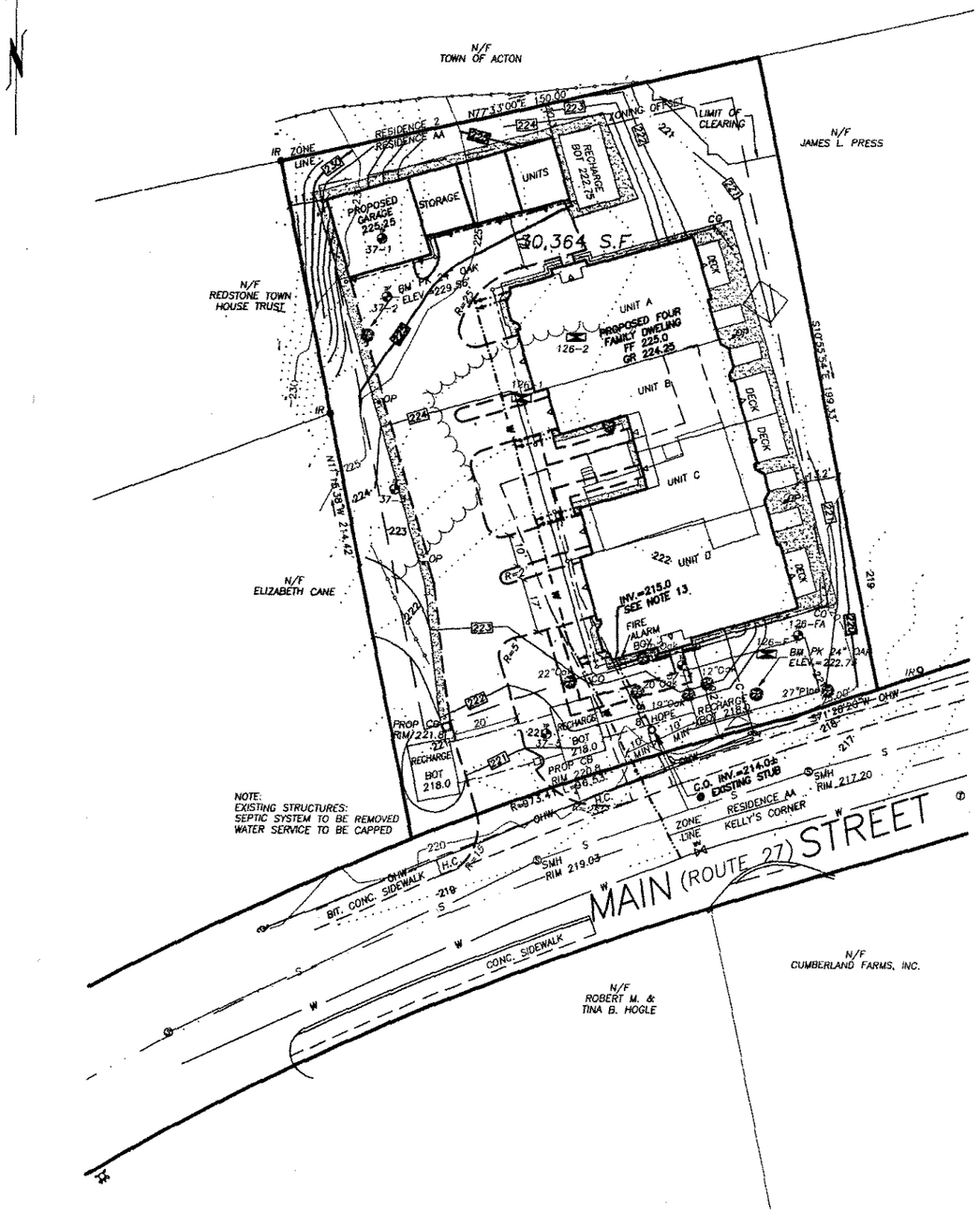
APPLICANT
EDWARD BRAVO
288 MAIN STREET
ACTON, MA 01720



LOCUS MAP
Scale: 1" = 1200 ft.

SHEET INDEX

ACTON SURVEY & ENGINEERING, INC.
Civil Engineers • Land Surveyors • Environmental Scientists
97 Great Road P.O. Box 666 Acton, Massachusetts 01720
Phone: (978) 263-3666 Fax: (978) 635-0218



ZONING ANALYSIS:

ZONING DISTRICTS: RESIDENCE AA (R-AA)
OVERLAY DISTRICT: GROUNDWATER PROTECTION DISTRICT 4

DESCRIPTION	REQUIRED/ ALLOWED	EXISTING	PROPOSED
LOT AREA (SF) :	10,000	30,364	30,364
MAX. DWELLING UNITS :	10	1	4
FRONTAGE (FT) :	100'	150.00'	150.00'
LOT WIDTH (FT) :	50'	148.82'	148.82'
SETBACKS (FT) : FRONT	30'	61.5'	30.2'
SIDE	10'	5.5'*	11.3'*
REAR	10'	108.4'	10.3'*
MIN. OPEN SPACE (%) :	35	90.2	50.6
LOT COVERAGE (SF) :	19,737	2,375	15,002
FLOOR AREA RATIO	N/A	0.039**	0.544**
NET FLOOR AREA (SF)	N/A	1,178**	16,508**
BUILDING HEIGHT (FT) :	36'	<36'	<36'
PARKING SPACES :	8	2	9

* SETBACK OF GARAGE
** BASED ON GROSS FLOOR AREA

NOTE: SITE CONTAINS NO FLOOD PLAIN OR WETLAND AREA

LIGHTING ANALYSIS:

DESCRIPTION	LAMPS NO.	LIGHTING POWER	MOUNTING
INCADESCANT SOFFIT LIGHT	17	60W	RECESSED IN SOFFIT
TOTAL LIGHTING POWER		1,020W	

ALLOWED LIGHTING POWER
PARKING LOTS/DRIVEWAY = 0.1 WATTS/SF*5,811 SF = 581 WATTS
BUILDING ENTRANCES = 13 WATTS/LF*171 LF = 2,223 WATTS
GARAGE ENTRANCES = 13 WATTS/LF*103 LF = 1,339 WATTS
4,143 WATTS

EARTH REMOVAL CALCULATIONS

GARAGE
4' AVG DEPTH X 600 SF = 2,400 CF

BUILDING
5' AVG DEPTH X 6,000 SF = 30,000 CF
32,400 CF/27 = 1,200 CY

SITE NOTES

1. Materials shall not flow into, or be deposited on Main Street.
2. All elevations refer to NGVD of 1929.
3. Water service installation and materials shall conform to the requirements of the Acton Water District.
4. Sewer connection installation and materials shall conform to the requirements of the Acton Board of Health.
5. The following permits/approvals have been identified as being required:
   a. Site Plan Special Permit – Acton Board of Selectmen
   b. Building and related permits – Building Department
   c. Water Connection permit – Acton Water District
   d. Sewer Connection permit – Acton Board of Health
   e. Public Way Construction Permit – Department of Public Works

   This list may not be complete and the status of individual permits will change with time. The contractor shall be responsible for obtaining all permits necessary and keeping them current, with copies being kept on site.
6. Gutters and downspouts are to be installed over all garage doors as required to intercept roof runoff.
7. Drip line stone shall be extended under decks and to foundation wall.
8. Existing survey monuments shall be marked in the field prior to construction.
9. Existing property markers damaged or destroyed during construction shall be reset and certified by a Registered Land Surveyor.
10. Handicap ramps at the new driveway apron shall be constructed in compliance with AAB standards.
11. Existing driveway to be abandoned and sidewalk curb shall be installed to match existing conditions. All landscape surfaces within right of way shall match existing conditions.
12. Existing septic system to be pumped and removed.
13. See existing conditions and landscape plans for additional details
14. Horizontal and vertical location of sewer stub to be confirmed prior to construction.

SCALE: 1 INCH = 20 FEET

FEET 0 5 10 20 40 60
METERS 0 5 10 15 20

LEGEND

- 255 EXISTING 5' CONTOUR
- EXISTING 1' CONTOUR
- 250 PROPOSED 5' CONTOUR
- PROPOSED 1' CONTOUR
- EXISTING PAVEMENT
- EXISTING BIT. CONC.
- PROPOSED PAVEMENT
- CATCH BASIN
- CO 18" HDPE CLEANOUT
- W EXISTING WATER MAIN
- W PROPOSED WATER SERVICE
- WATER GATE
- S EXISTING SEWER MAIN
- S PROPOSED SEWER SERVICE
- SEWER MANHOLE
- UTILITY POLE
- OHW EXISTING OVERHEAD WIRES
- C PROPOSED UNDERGROUND CABLE UTILITIES INCLUDING FIRE ALARM
- SIGN
- ZONE LINE
- 60 WATT INCADESCANT RECESSED SOFFIT LIGHT
- TR TREE TO REMAIN
- EXISTING IRON ROD

TEST HOLES

NUMBER	ELEVATION
37-1	227.4
37-2	226.2
37-3	223.2
37-4	220.8
37-5	221.3

No.	DATE	DESCRIPTION
3	3/06/07	TOWN COMMENTS
2	12/28/06	TOWN COMMENTS
1	12/06/06	TOWN COMMENTS

REVISIONS

SITE PLAN

288 MAIN STREET
ACTON, MASSACHUSETTS

PREPARED FOR:
EDWARD BRAVO
288 MAIN ST
ACTON, MA 01720

SCALE: 1"=20' DATE: JULY 10, 2006

MARK DONOHOE CIVIL No. 27143 REGISTERED PROFESSIONAL ENGINEER
7/6/07

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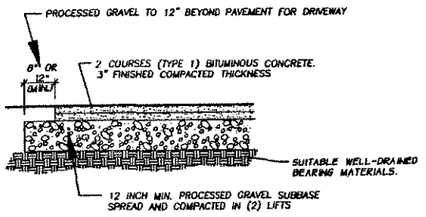
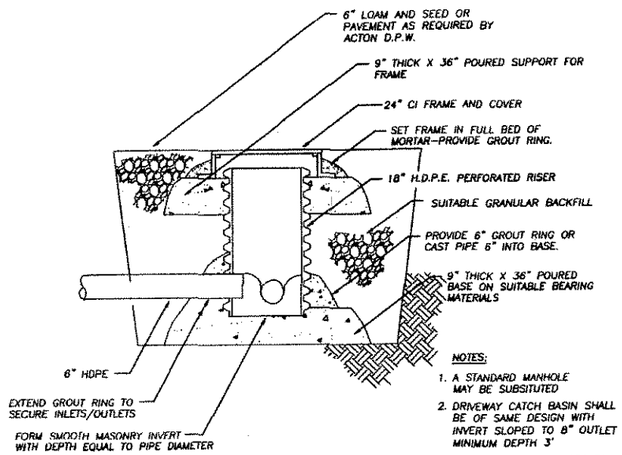


NOTES:

1. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE MASS. HIGHWAY DEPARTMENT SPECIFICATIONS AND REGULATIONS, UNLESS APPROVED OTHERWISE, IN WRITING BY THE PROJECT ENGINEER.
2. PAVEMENT SHALL BE CLASS 1 BITUMINOUS CONCRETE LAID IN 2 COURSES TO A FINISHED DEPTH OF 3" (1 1/2" MIN. BINDER WITH 1 1/2 MIN. WEARING COURSE ABOVE
3. GRAVEL SUBBASE SHALL CONTAIN NO STONES GREATER THAN 3" AND BE INSTALLED TO A MIN. DEPTH OF 12". REMOVE ALL ORGANIC SILTS & UNSUITABLE MATERIALS BENEATH.

BITUMINOUS CONC. PAVING DETAIL

N.T.S.

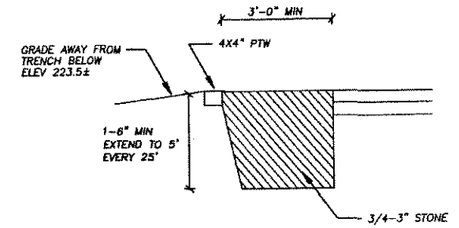


NOTES:

1. A STANDARD MANHOLE MAY BE SUBSTITUTED
2. DRIVEWAY CATCH BASIN SHALL BE OF SAME DESIGN WITH INVERT SLOPED TO 8" OUTLET MINIMUM DEPTH 3'

SEWER CLEANOUT DETAIL

N.T.S.



DRIVEWAY RECHARGE TRENCH

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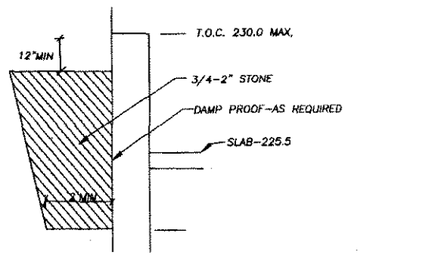
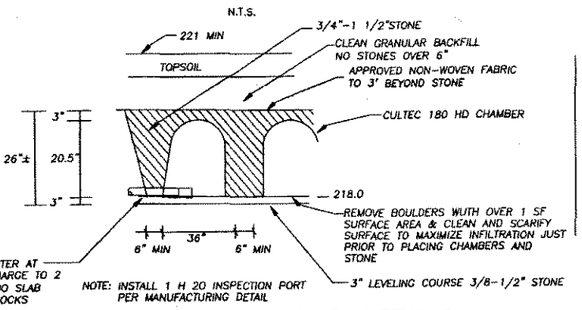


GARAGE RECHARGE TRENCH DETAILS

N.T.S.

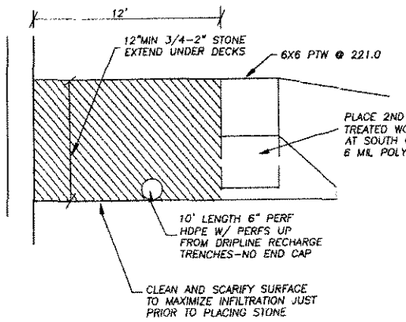


FRONT RECHARGE WORKS DETAILS

N.T.S.

GENERAL NOTES:

1. Plans were prepared for named client and project. Reproduction in whole, in part or by adaptation for other purposes is expressly prohibited.
2. Drawings shall not be scaled. If clarification of intent is REQUIRED, contractor shall obtain prompt clarification prior to continuing work.
3. Contractor shall visit site prior to initiation of work and shall notify ACTON SURVEY & ENGINEERING, INC. and owner of any discrepancies with site conditions, or proposed construction, on date discovered.
4. Contractor shall be responsible for coordinating proposed construction with existing conditions.
5. Contractor shall notify Dig-Safe [1-888-344-7233] and verify all underground utilities prior to construction.
6. Contractor shall be responsible for obtaining all necessary permits and licenses.
7. All work shall conform to all local and state regulatory agencies and utility company requirements.
8. Upon entering the SITE, the contractor shall become responsible for all erosion control, dewatering and shall undertake all measures to protect wetlands, the drainage system and streets from siltation and dust.
9. Contractor shall be responsible for repairing any damage caused to roads, walks, utilities, site improvements [existing or proposed] both inside and outside the limit of work if damage due to work directly associated with this project.
10. Existing utilities shall be maintained in service as required by the use of site and adjacent properties. Relocate utility lines as required.
11. The drainage system shall be maintained and functional during construction and all catch basins, manholes & pipes shall be cleaned after the completion of the project.
12. The "site plan" is based on topographic survey showing all visually apparent features of the site on the date(s) that surface explorations and topography were completed.
13. No attempt was made, in preparing the plans, to ascertain the location of non-visually apparent subsurface utilities and structures, or conditions.
14. The limit of work shall be as designated and / or the edge of the proposed grading and / or the property lines, if not indicated.
15. Materials imported to the site shall be free of hazardous waste and noxious materials, stored as designated and shall not hamper the site activities.
16. Materials exported from the site shall become the property of the contractor and be disposed of in a legal manner.
17. All existing and new utility structures shall be adjusted to finished grades. Setting of rims temporarily at binder course may be required.
18. All water mains, water services and force mains shall have a five (5') foot minimum cover.
19. All pavements shall be cut to a vertical face outside limits of prior disturbance and prior to installing adjacent new pavements. All new pavements shall be installed in a manner that is uniform, with watertight joints resulting.
20. The project shall be complete when the site is found to be litter/debris free, erosion resistant, all erosion barriers are removed and pavements, catch basins, manholes and pipes are clean.
21. The contractor shall clearly mark the limits of work in the field prior to the the start of construction.
22. Hauling of earth to or from the site shall be done between the hours of 9:00 a.m. and 4:00 p.m. on weekdays only.



REAR RECHARGE PATIO DETAILS

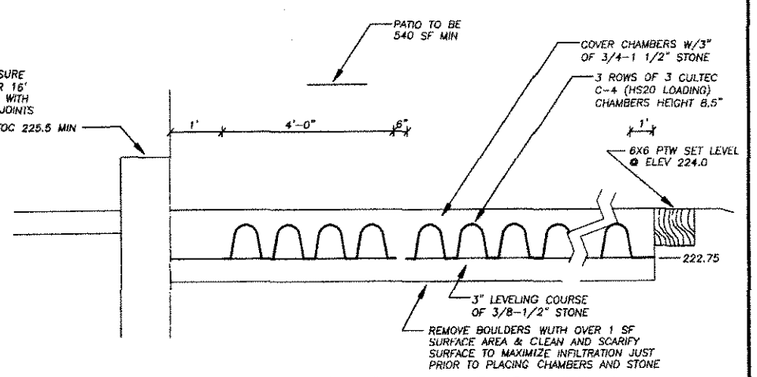
N.T.S.

EROSION & SEDIMENT CONTROL

1. The site shall be kept neat, orderly and litter free at all times. Containers shall be kept on site and be utilized and emptied, as necessary.
2. Silt laden runoff shall not be allowed to flow to Main Street and a temporary construction entrance shall be installed on the applicants property in the area of the proposed driveway prior to the abandonment of the use of the existing driveway for entrance onto the property. The area between the construction entrance and Main Street shall be temporarily paved with 2-inches of bituminous concrete.
3. The area of disturbance shall be kept to the minimum required for the construction effort and areas not required to be disturbed shall be stabilized within a month by vegetation, spreading of wood chips or other suitable erosion resistant materials.
4. Silt fences should be installed as construction barriers and to provide for the intercepation of silt laden runoff. A barrier along the easterly property line shall be installed to control construction in this area.
5. Care must be taken to limit the concentration of runoff.
6. Recharge works shall be installed when the site development has progressed to the stage where silt laden runoff will not enter them.

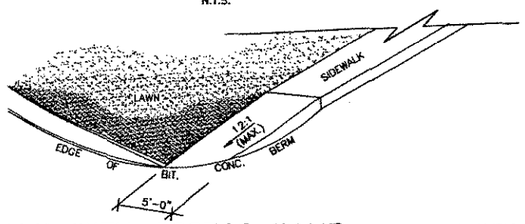
STORMWATER MANAGEMENT

1. Runoff from this site is controlled by the stone filled trenches around the buildings, the stone patios on their west sides, a buried chamber system in the area adjacent to Main Street and the stone filled trench along the driveway.
2. No maintenance of the recharge works should be required if the site's surfaces are properly maintained, as described below
3. The driveway shall be kept free of sand and other materials which could be carried to the recharge works. The driveway faces south and there should be no need to spread sand to increase traction. Deposits of sand dropped from vehicles should be promptly removed by means of a broom and shovel. If excessive deposits of materials are built up on or adjacent to the driveway commercial vacuum sweeping should be performed.
4. Landscape surfaces should be maintained with excessive grass clippings and leaves being removed.
5. The dripline recharge trenches shall be kept free of litter and weeds at all times. Planting beds shall be kept erosion resistant.
6. Observation ports have been extended to the ground surface at each recharge system. The observation ports should be opened and observed for the presence of water after heavy rainfalls, especially during the winter/spring months If water is present the level should be monitored on succeeding days and if the presence of water persists, or if the level is within two feet of the ground surface the design engineer should be notified so that a complete assessment of the system and possible remedial measures can be taken.
7. Catch basins have been installed on the both sides of the driveway to intercept materials that will settle from runoff [sand]and materials that will float [oil]. It is important that the catch basin be properly maintained to protect and save the cost of replacing the buried recharge system.
   - The basin has a four foot deep sump, which should be cleaned out whenever the water level, as measured by lowering a dipstick through the grate, is less than 3 feet.
   - When the dipstick is removed its surface should be observed for the presence of hydrocarbons. If hydrocarbons are present they should be removed by a licensed hauler and their source determined and abated.
   - The basin should be observed quarterly, especially in early spring.
   - The Exxon station car wash utilizes a contractor, who could be hired to clean the basin, or a levered post hole digger could be utilized
   - The basin has a 10 inch cleanout to allow the pipe to the recharge system to be maintained.
   - If runoff is seen bypassing the basin and discharging onto Main Street, the design engineer should be notified.
8. If water is seen to discharge from the patios on the east side of the buildings the design engineer should be notified.



REAR RECHARGE WORKS DETAIL

N.T.S.



SIDEWALK WITH ACCESS RAMP

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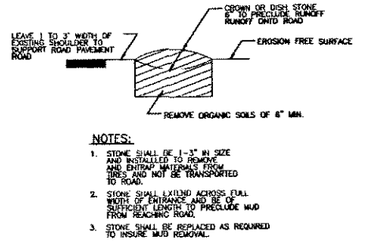


NOTES:

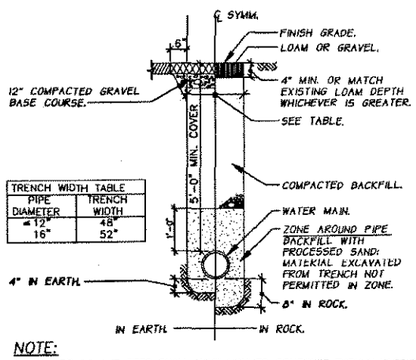
1. STONE SHALL BE 1-3" IN SIZE AND INSTALLED TO REMOVE AND ENTRAP MATERIALS FROM TIRES AND NOT BE TRANSPORTED TO ROAD.
2. STONE SHALL EXTEND ACROSS FULL WIDTH OF ENTRANCE AND BE OF SUFFICIENT LENGTH TO PRECLUDE MUD FROM REACHING ROAD.
3. STONE SHALL BE REPLACED AS REQUIRED TO INSURE MUD REMOVAL.

TEMPORARY CONSTRUCTION ENTRANCE

N.T.S.

RECHARGE WORKS SCHEDULE

NEXT TO DRIVEWAY:	5 ROWS OF 2 CHAMBERS 18 X 13.5'
MAIN SYSTEM:	5 ROWS OF 6 CHAMBERS 18 X 39'



TRENCH WIDTH TABLE	
PIPE DIAMETER	TRENCH WIDTH
≤ 12"	48"
16"	52"

NOTE:

1. ALL BENDS AND TEES SHALL HAVE POURED CONCRETE THRUST BLOCKS WITH A BEARING SURFACE OF 3 S.F. ON SUITABLE UNDISTURBED SOIL.

WATER MAIN TRENCH DETAIL

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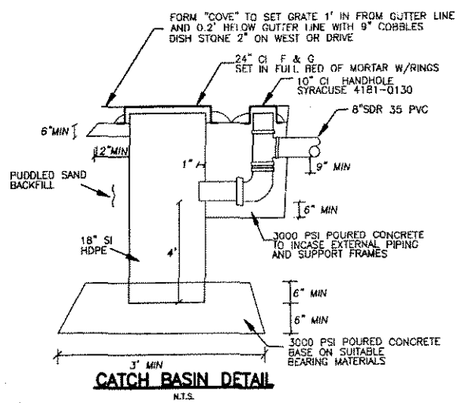
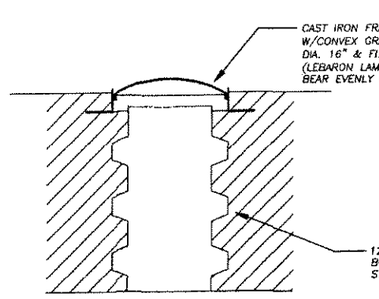


CATCH BASIN DETAIL

N.T.S.



OBSERVATION PORT DETAIL

N.T.S.

No.	DATE	DESCRIPTION
3	3/06/07	TOWN COMMENTS
2	12/28/06	TOWN COMMENTS
1	12/06/06	TOWN COMMENTS

REVISIONS

DETAILS

288 MAIN STREET
ACTON, MASSACHUSETTS

PREPARED FOR:
EDWARD BRAVO
288 MAIN ST
ACTON, MA 01720

SCALE: 1"=20'

MARK DONAHUE CIVIL No. 27148 REGISTERED PROFESSIONAL ENGINEER

DATE: JULY 10, 2006

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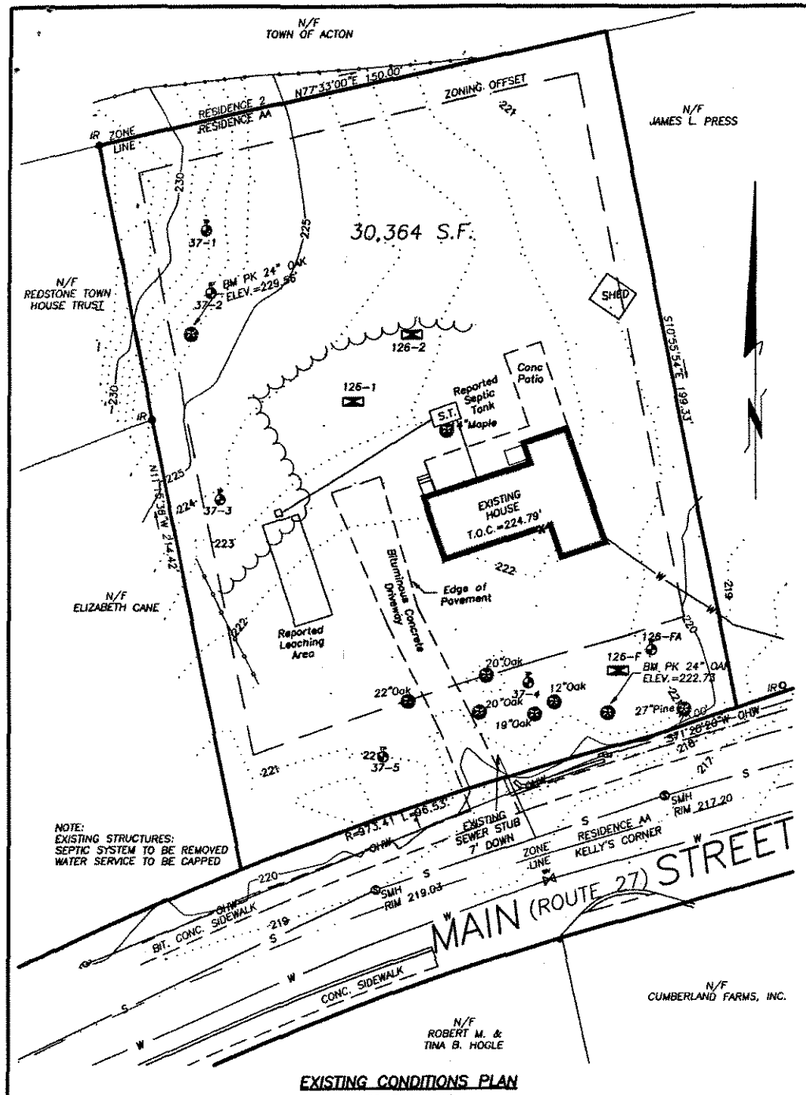
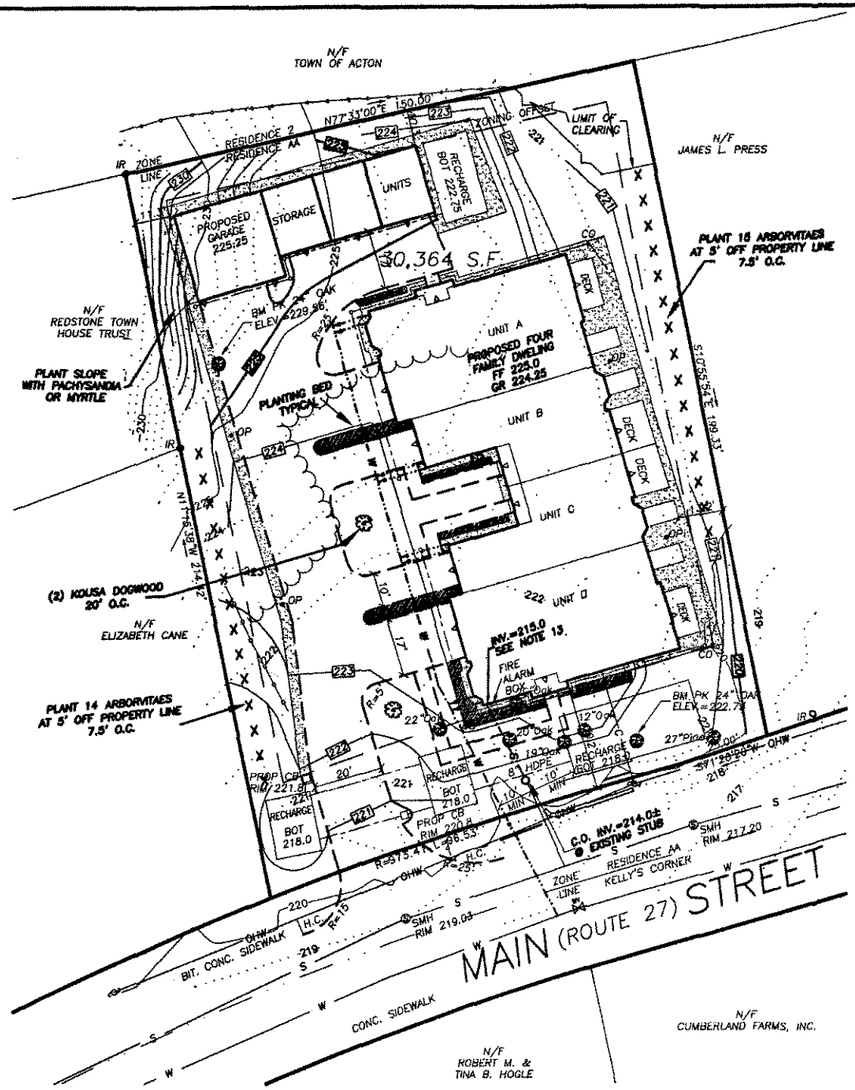


EXISTING CONDITIONS PLAN

SCALE: 1" =20'



LANDSCAPE PLAN

SCALE: 1" = 20'

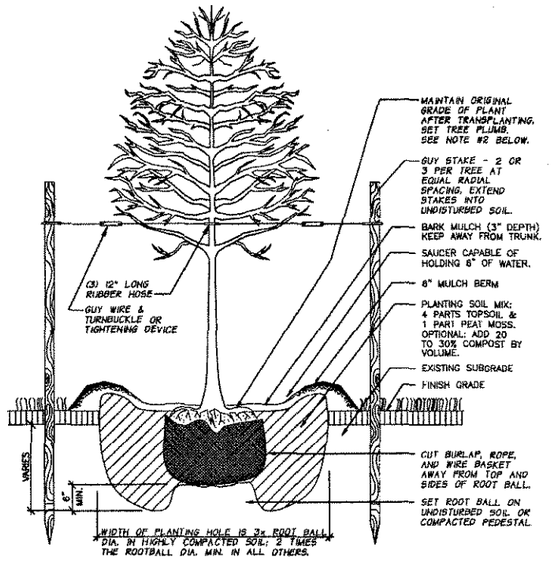
LANDSCAPE NOTES

1. All trees between the front of building and the road and between the east property line and the driveway are to be removed.
2. Woods in northeast corner of property are to remain.
3. All other trees and vegetation are to be removed with branches and brush being chipped and used for temporary mulch or erosion control.
4. Existing topsoil shall be tested for fertility and alkalinity prior to being utilized for planting grass.
5. Plantings shall consist of:
   - 29, 3-4 high, balled and burlap, Dark American Arborvitae planted on 7.5 foot centers, 5 feet off both side lines, as shown.
   - 2, 1" to 2" caliper Kousa Dogwoods planted as shown
   - Plant beds as shown-planting with dwarf day lilies at a density of one plant per 3 square feet and a daffodil/narcissus bulb mix at a density of 1 bulb per square foot. Miscanthus with a mature height of 4 feet may be planted in beds adjacent to Unit D.
6. Steep slopes around free standing garage shall be mulched with wood chips and planted with Pachysandra or Myrtle at a density of one plant per 2 square feet.
7. All other areas of the property shall be covered with 8 inches of properly prepared topsoil planted with a drought resistant grass suitable for a residential lawn.
8. All plantings shall be irrigated to insure growth and decrease wind borne erosion.

PLANT LIST

29 Dark American Arborvitaes-Thuja occidentalis 'Nigra'
3-4 feet high when planted-mature height 10-30 feet, spread 10-12 feet

2 Kousa Dogwood-Cornus-kousa
1-2 inch caliper when planted-mature height 20 feet, spread 20 feet apart



NOTES:

1. GUY WIRES SHALL NOT ABRADE BRANCHES.
2. TRUNK FLARE AND TOP OF ROOT BALL SHOULD BE AT GRADE IN WELL DRAINED SOIL, UP TO 4 INCHES ABOVE GRADE IN POORLY DRAINED SOILS.
3. PACK BACKFILL SOIL AROUND BASE OF ROOT BALL TO STABILIZE; ALLOW REST OF BACKFILL TO SETTLE NATURALLY OR TAMP LIGHTLY.

TREE & SHRUB PLANTING DETAILS

N.T.S.

LEGEND

- 255 — EXISTING 5' CONTOUR
- EXISTING 1' CONTOUR
- 250 — PROPOSED 5' CONTOUR
- PROPOSED 1' CONTOUR
- EXISTING PAVEMENT
- EXISTING BIT. CONC.
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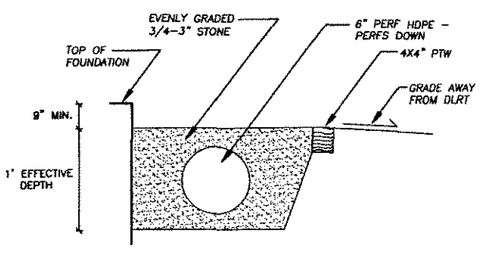
- S — PROPOSED SEWER SERVICE
- UTILITY POLE
- OHW — EXISTING OVERHEAD WIRES
- SIGN
- ZONE LINE
- EXISTING IRON ROD
- WOODS

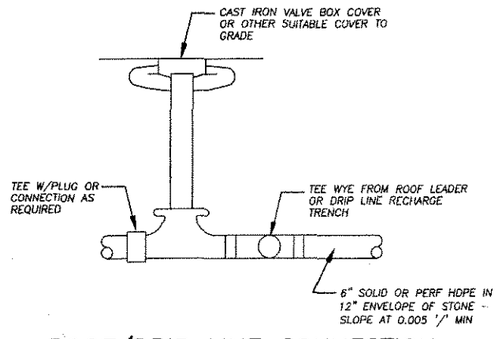


NOTES:

TRENCHES SHALL BE A MINIMUM OF 2'-0" WIDE OR AS REQUIRED TO EXTEND 6" BEYOND EAVES - BASEMENT AND FOUNDATION FOOTINGS TO BE SET ON A MINIMUM OF 6" OF CRUSHED STONE

DRIP LINE RECHARGE TRENCH DETAIL

N.T.S.



ROOF/DRIP LINE CONNECTION

N.T.S.

SCALE: 1 INCH = 20 FEET

FEET 0 5 10 20 40 60

METERS 0 5 10 15 20

No.	DATE	DESCRIPTION
3	3/06/07	TOWN COMMENTS
2	12/28/06	TOWN COMMENTS
1	12/06/06	TOWN COMMENTS

REVISIONS

EXISTING CONDITIONS AND LANDSCAPE PLANS

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ACTON, MASSACHUSETTS

PREPARED FOR:
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6270 - 3/3